



Holland Landing Prairie

Preliminary Park Management Plan





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2011

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Opportunity to Comment

Holland Landing Prairie Provincial Nature Reserve

Ontario Parks is preparing a management direction document for Holland Landing Prairie Provincial Nature Reserve as part of a multi-staged planning process. After careful consideration of related planning information and review of comments received thus far, this document outlines Ontario Parks draft policies for the provincial park. This preliminary plan contains proposed site objectives, policies and actions related to managing the protected area's natural, cultural and recreational values. It will guide the management of the provincial park over the next 20 years.

Publication of this preliminary management plan provides an opportunity for Aboriginal and public involvement to comment on and help form the management direction for this provincial park. Under section 10 (6) of the *Provincial Parks and Conservation Reserves Act, 2006* landholders, local governments, interested groups and persons including Aboriginal people and members of the public are invited to comment on the preliminary management plan.

An open house will be held to provide the opportunity to review the plan, view maps, and discuss issues with members of the planning team. Further information regarding the date, time and location of the open house, and the management planning process, can be found in the attached letter and on the Ontario Parks website (www.OntarioParks.com). To make your submission effective, please briefly state your reasons for agreeing or disagreeing with the proposed management direction. You may also make suggestions or comments on other topics important to you. Respondents wanting their commercial business information to remain private should mark those parts of their submissions 'confidential'. When preparing final plans, the Ministry of Natural Resources will consider all submissions on this preliminary management plan.

All comments regarding the preliminary management plan should be submitted to the attention of:

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MNR is collecting your personal information and comments under the authority of Ontario's *Provincial Parks and Conservation Reserves Act, 2006*. Any personal information you provide (address, name, telephone, etc.) will be protected in accordance with the *Freedom of Information and Protection of Privacy Act*. However, your comments will become part of the record of consultation and may be shared with the general public. Your personal information may be used by MNR to send you information about future MNR planning initiatives in the area. If you have questions about the use of your personal information, please contact the Strategic Planning Officer, Ontario Parks, (705) 755-1773.

Thank you in advance for your interest and comments on the future management of this park.

Yours truly,

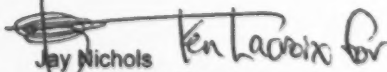

Jay Nichols
Central Zone Manager
Ontario Parks

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1 CONTEXT

1.1 Provincial Parks and Conservation Reserves Act

Ontario's *Provincial Parks and Conservation Reserves Act* (PPCRA) is the legislation that guides the planning and management of the protected areas system. The PPCRA has two specific principles that guide all aspects of planning and management of Ontario's system of provincial parks and conservation reserves:

- Maintenance of ecological integrity shall be the first priority and the restoration of ecological integrity shall be considered
- Opportunities for consultation shall be provided. 2006, c. 12, s. 3

1.2 Statement of Environmental Values and the Environmental Bill of Rights

Under the *Environmental Bill of Rights* (EBR) the Ministry of Natural Resources must develop a Statement of Environmental Values (SEV) that describes how the purposes of the EBR are to be considered whenever decisions are made in the Ministry that might significantly affect the environment. This includes decisions made as a result of preparing management direction for a protected area.

The Ministry's SEV has been considered throughout the planning process. The management direction for Holland Landing Prairie Provincial Nature Reserve will further the objectives of managing Ontario's resources on an environmentally sustainable basis.

1.3 Ecological Integrity

The PPCRA states that ecological integrity will be the first priority of planning and management activities in Ontario's provincial parks system.

In this context, ecological integrity includes, but is not limited to:

- (a) healthy and viable populations of native species, including species at risk, and maintenance of the habitat on which the species depend; and
- (b) levels of air and water quality consistent with protection of biodiversity and recreational enjoyment.

All planning and management activities for Holland Landing Prairie Provincial Nature Reserve will consider ecological integrity first and foremost in their implementation.

1.4 Aboriginal Peoples

The Chippewas of Georgina Island First Nation is located on three islands in Lake Simcoe, north of the town of Georgina, approximately 42 km from Holland

Landing Prairie. The current lands of the Chippewas of Georgina Island First Nation were confirmed by the Williams Treaties in 1923. The Chippewas of Georgina Island First Nation is a member of the Ogemawahj Tribal Council. The council is an organization that provides support in the planning and delivery of community-based initiatives of six First Nation communities in South Central Ontario.

The Holland Landing Prairie area is known to have been used as a stopover point by Aboriginal peoples as recently as 150 years ago during the fur trade. Two known Aboriginal burial sites from the period of the Mississauga tribe are located near the park.

Holland Landing Prairie Provincial Nature Reserve is not part of any known land claims.

1.5 Planning Context

This preliminary park management plan has been prepared consistent with direction contained in Our Sustainable Future, Ministry of Natural Resources Strategic Directions (2005), in Protecting What Sustains Us: Ontario's Biodiversity Strategy (2005) and in Ontario Provincial Parks: Planning and Management Policies (1992 update). Additionally, Holland Landing Prairie Provincial Nature Reserve will be managed to protect any species at risk (SAR) and their habitat in a manner consistent with the *Endangered Species Act, 2007* (ESA). All activities undertaken in Holland Landing Prairie Provincial Nature Reserve must comply with A Class Environmental Assessment for Provincial Parks and Conservation Reserves (Class EA-PPCR), where applicable.

1.6 Summary of Significant Management Topics

The tallgrass prairie plant communities of Holland Landing Prairie are extremely sensitive to human disturbance, and are being negatively impacted by a number of factors, including the following:

- Conifer plantations have become well established and are continuing to encroach significantly into existing and potential prairie habitat.
- Extension of lawns and gardens into the park from adjacent residential properties, dumping of yard waste and removal of park fencing are ongoing concerns.
- Unauthorized off-road vehicle use and informal trail development continue to impact vegetation and erode the sandy soils of the park.
- The increasing presence of non-native, invasive plant species poses a significant threat to the biodiversity of the site.
- Fire suppression has also been a significant stressor to the prairie plant communities.

Active management is needed to address each of these impacts. Remnant patches of prairie vegetation, along with the existing seed bank in the nature

reserve, are believed to be of sufficiently high quality to effectively form the basis of restoration efforts, when combined with appropriate management techniques.

2 INTRODUCTION

Holland Landing Prairie Provincial Nature Reserve is located in the Town of East Gwillimbury in the Regional Municipality of York, adjacent to the village of Holland Landing and approximately 10 km south of Lake Simcoe (Fig. 1). The park was established in 1994 and is managed as a nature reserve class park. The park is regulated under the PPCRA (R.R.O. 2007, O. Reg 316/07, s. 2). The 34.2 ha site protects one of the very few remaining areas of tallgrass prairie in Ontario and includes almost the entire relict prairie known from this area. The prairie and associated shrub thickets provide habitat for approximately five provincially and 50 regionally rare vascular plant species.

Tallgrass prairie habitat is extremely rare in Ontario and is largely restricted to the southwestern part of the province. The significance of the Holland Landing site has been recognized since 1819, when renowned botanist John Goldie discovered several unusual plant species in this area. Holland Landing Prairie Provincial Nature Reserve was established to protect the significant natural heritage features of the site, and to provide high quality opportunities for natural heritage appreciation.

Tallgrass prairie communities represent significant ecological values and the primary reason for the park's protection and nature reserve classification. This plan provides for the protection, maintenance, enhancement and restoration of these communities. Due to the advanced state of deterioration of these ecological values and the provincial (and global) vulnerability of the plant communities in question, active management is required. Management techniques may include mimicking natural disturbance regimes through prescribed burning and mowing, removal of planted conifers, managing erosion in active sand blowout areas, restricting recreational activities that are negatively impacting the park ecology and other available techniques.

This plan provides the long term direction for managing Holland Landing Prairie Provincial Nature Reserve, including the purpose and vision, permitted uses, zoning, and implementation priorities. This management plan is written with a 20 year perspective and will be examined on a 10 year cycle and amended as the need arises. Section 11.0 describes the process for review and amendment of the plan.

Holland Landing Prairie Provincial Nature Reserve is managed according to the purpose, principles and objectives of the *Provincial Parks and Conservation Reserves Act, 2006* (PPCRA) and related provincial policies (available on the internet at www.ontarioparks.com).

FIGURE 1

REGIONAL CONTEXT



Holland Landing Prairie

Legend

- Holland Landing Prairie
- City
- Major Road
- Minor Road
- Provincial Park
- Conservation Reserve
- Water

0 10 20
Kilometres

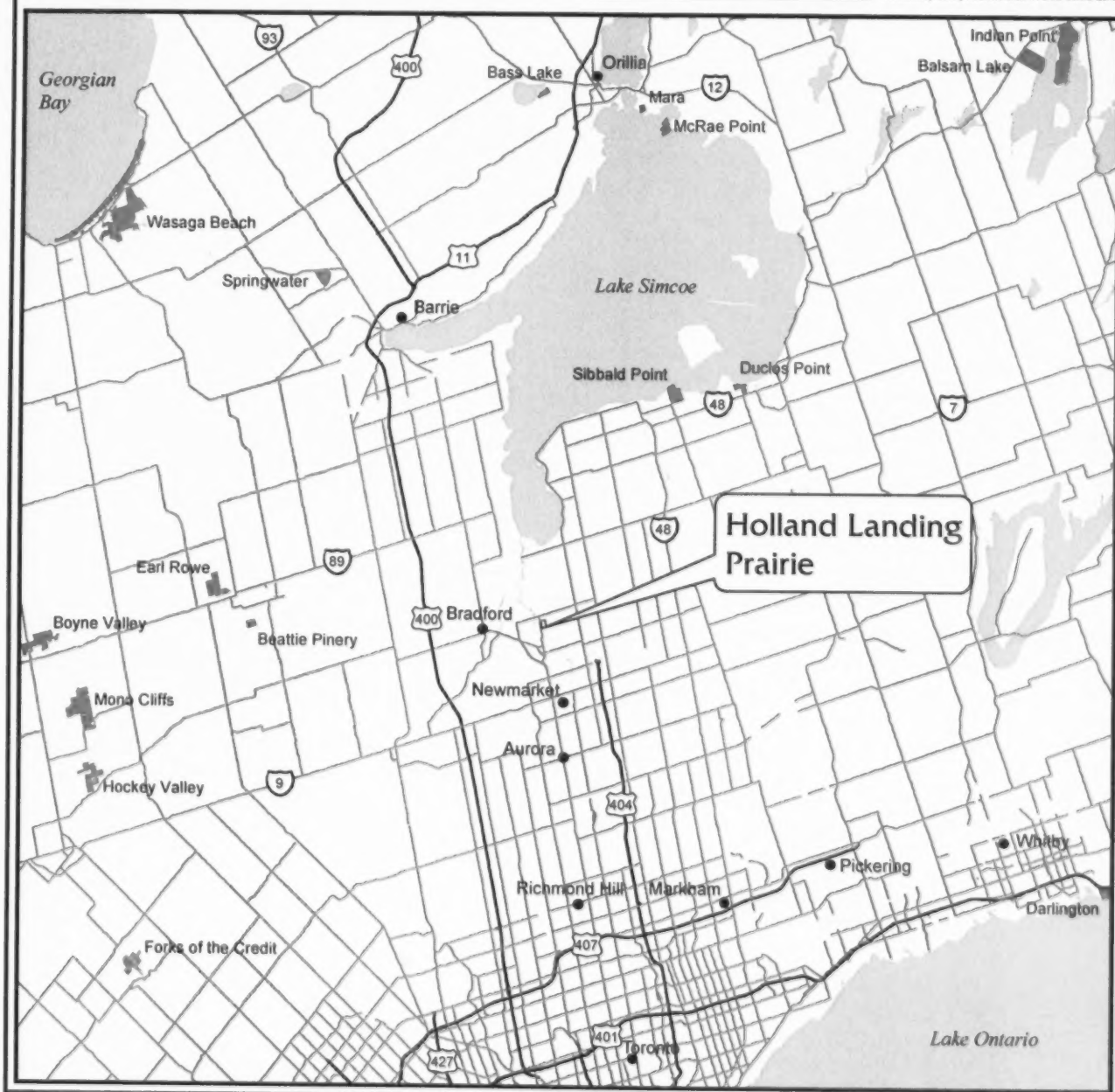


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3 PARK CLASSIFICATION

Through park classification, Ontario's provincial parks are organized into broad categories, each of which has particular purposes and characteristics. Holland Landing Prairie is managed as a nature reserve class provincial park. Nature reserves are areas selected to protect representative ecosystems and provincially significant elements of Ontario's natural heritage, including the distinctive natural habitats and landforms, for their intrinsic value to support scientific research and maintain biodiversity. This classification has been assigned to the park in recognition of the significant natural heritage values that it protects, and for the opportunity to research gene pools for prairie flora and fauna which it provides.

4 GOAL

The goal of Holland Landing Prairie Provincial Nature Reserve is to protect the relict tallgrass prairie vegetation communities of the park and to protect and celebrate the role of tallgrass prairie in Ontario's ecological mosaic. Due to the rarity of tallgrass ecosystems and the degree to which the remnants at Holland Landing Prairie have been disturbed, the goal of protection will require active restoration and management. Appreciation for the park's natural heritage and ecological values will be actively encouraged.

5 OBJECTIVES

5.1 Protection Objective

Ontario's protected areas play an important role in representing and conserving the diversity of Ontario's natural features and ecosystems across the broader landscape. Protected areas include representative examples of life and earth science features, and cultural heritage features within ecologically or geologically defined regions.

The park's protection objective is to:

- Protect and restore one of the few remaining tallgrass prairie communities in Ontario.

Tallgrass prairie is a globally imperilled ecosystem and an important feature of Ontario's natural heritage. Protection of tallgrass prairie species and communities will be the primary consideration in all management and implementation activities carried out at Holland Landing Prairie. No activities or development will be permitted which further threaten the viability of this ecosystem. Management activities which actively restore and maintain tallgrass plant communities and the conditions which sustain them will be implemented.

5.1.1 Life Sciences

Holland Landing Prairie supports the largest remnant tallgrass sand prairie community in south-central Ontario. Tallgrass prairie was once more abundant in Ontario, but due to urbanization, agriculture, pollution and other causes, less than 3% of the original area remains in southern Ontario (Rodger, 1998). Remnant tallgrass prairie habitats are largely restricted to small, isolated pockets in southern, central and northwestern Ontario.

The significance of the Holland Landing site was first recognized in 1819, when botanist John Goldie discovered several unusual plant species in this area. His most important find was prairie buttercup (*Ranunculus rhomboideus*). Holland Landing is the type locality for this species, meaning that the specimens collected here were used to describe prairie buttercup to science for the first time. The prairie was 'rediscovered' in 1976 by A.A. Reznicek.

Conifers were planted throughout much of the park in 1946 and 1949 by the Department of Lands and Forests. In 1975 the MNR planted more conifers in research plots. An upland deciduous forest composed of sugar maple (*Acer saccharum* ssp. *saccharum*), white birch (*Betula papyrifera*), white ash (*Fraxinus americana*) and other tree species is located in the north east section of the park. A few smaller stands of native, mixed forest types are also scattered throughout the park.

The park is located in Ecodistrict 6E-6, and is situated within the Simcoe Lowlands physiographic region on the Algonquin Lake Plain. The park's well-drained soils are primarily Brighton sandy loams, composed of deep deposits of sand and silt underlain by clay till. Due to these geological features and the presence of tallgrass prairie communities, this site was designated as an Area of Natural and Scientific Interest (ANSI) in the late 1980's (Hanna, 1984).

The park contains 17 Ecological Land Classification community units and three landform/vegetation associations. A total of 305 taxa of vascular plants, 61 species of birds, one amphibian, two reptiles and seven mammal species have been found at the site (Korol, 2007).

Red shouldered hawk (*Buteo lineatus*) has been documented within park boundaries, and a pair of displaying birds was observed over the north end of the site in June 2006. It is probable this species breeds in the area, most likely in the native deciduous woodlot that extends from the north east section of the nature reserve. Monarch butterflies (*Danaus plexippus*), a species ranked of special concern by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) and by the Committee on the Status of Species at Risk in Ontario (COSSARO), were visually confirmed in June 2006 along the hydro corridor (Korol, 2007).

MNR's Natural Heritage Information Centre (NHIC) currently tracks five vascular plant species found in the park (i.e., species of provincial conservation concern, ranked S1, S2, S3). Butternut (*Juglans cinerea*), ranked S3, is also classified as endangered by COSEWIC and COSSARO. The tallgrass prairie plant community found in the park is ranked S1 by the NHIC.

5.1.2 Earth Sciences

The park is underlain by fine to coarse-grained glaciolacustrine sand in a low-relief plain containing subtle, low, (about one metre high) ridges trending roughly in an east-west orientation. Higher forms (up to three metres high) show more abrupt relief and expose bare sand which contains small blowouts. The surficial features are interpreted to represent nearshore to emerging shoreline features (spits and offshore bars) associated with glacial Lake Algonquin, and small dunes which formed after water levels dropped. The underlying Middle Ordovician bedrock is not exposed in the park (Kor, 2007).

The features in Holland Landing Prairie are considered to be locally significant for their representation of glacial Lake Algonquin deposits in the Lake Simcoe basin (Kor, 2007).

The uniform sandy substrate is susceptible to erosion if the vegetation cover is disturbed. This is notable in the small dune areas where vegetation removal has caused enhanced wind and runoff erosion and minor local blowouts (Kor, 2007).

5.1.3 Cultural Heritage Resources

Holland Landing Prairie is known to have been used by Aboriginal peoples as recently as 150 years ago during the fur trade as a stopover point. The nature reserve is also in close proximity to two known Aboriginal burial sites from the period of the Mississauga tribe.

A formal study of cultural resources has not been performed for the park. Any future restoration activities involving significant ground disturbance will require the prior completion of a site-specific archaeological study.

5.2 Recreation Objective

The park's recreation objective is to:

- Manage for minimal impact recreation uses, in a manner which fosters appreciation for the natural heritage values of the park while ensuring the level of protection granted to nature reserve class parks.

5.3 Heritage Appreciation Objective

The park's heritage appreciation objective is to:

- Provide opportunities for high-quality public outreach and natural heritage education. Activities should encourage appreciation for, and develop a better understanding of, prairie ecosystems and the role of Holland Landing Prairie in Ontario's system of parks and protected areas.

5.4 Scientific Research Objective

The park's scientific research objective is to:

- Foster scientific research and learning related to the isolated and unique nature of Holland Landing Prairie. MNR will encourage initiatives which promote learning and scientific understanding about the function and protection of prairie ecosystems, while respecting and protecting the sensitive soil and plant communities.

Specific research initiatives may include: the role of fire in restoring central Ontario prairie, long term seed bank retention within plantations, and rate of spread of prairie vegetation into newly opened sites. Particular emphasis will be placed on the implementation and long-term monitoring of prairie restoration techniques.

6 BOUNDARY

Holland Landing Prairie Provincial Nature Reserve is located in the Town of East Gwillimbury in the Regional Municipality of York, approximately 10 km south of Lake Simcoe (Fig. 1). This 34.2 ha park was established in 1994 as a nature reserve class park, and was originally regulated under the *Provincial Parks Act* (R.R.O. 1990, Reg. 951, *Amended to O. Reg. 768/94*), and currently regulated under the PPCRA (R.R.O. 2007, O. Reg 316/07, s. 2). The park occupies parts of lots 112, 113 and 114, Concession 1, East of Yonge Street (Fig. 2)

Park management plan policies apply only to the area within the regulated boundary of the park. Within the park boundary, the protection of park values and features will be achieved through appropriate zoning, the control of land use and activities, education, monitoring of ecological impacts and active management and restoration activities.

Additions to the park boundary will be considered if the property is needed to enhance the values of the park. Potential acquisitions are subject to available resources and the willingness of the owners to sell or lease their properties or enter into a conservation easement.

FIGURE 2

PARK BOUNDARY

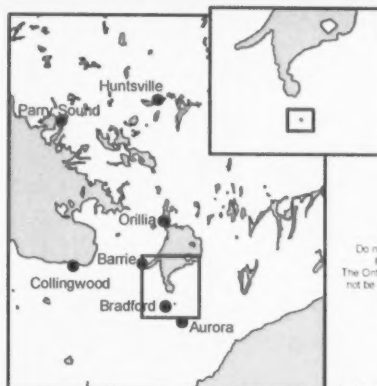


Holland
Landing
Prairie

Legend

- Hydro Line
- Trail
- Minor Roads
- Major Roads
- Holland Landing Prairie
- Local Park
- Lots/Concessions

0 125 250
Metres

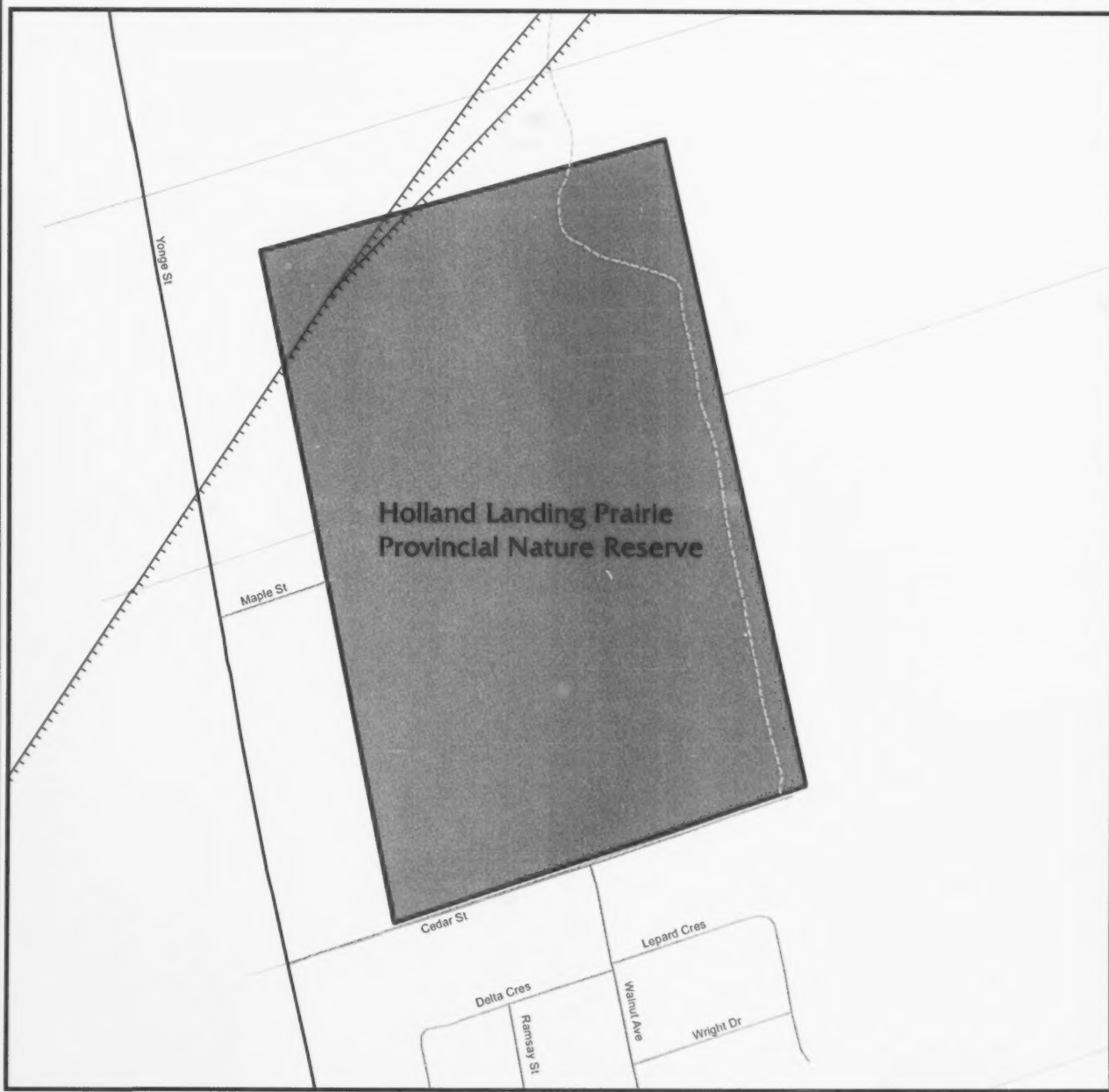


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7 ADJACENT LAND USES

Holland Landing Prairie Provincial Nature Reserve has been identified in the Natural Heritage Strategies of the Town of East Gwillimbury, the Regional Municipality of York and the Lake Simcoe Region Conservation Authority as contributing significantly to the natural heritage values of the region. The park is located adjacent to, but not within, the areas which are governed by the *Greenbelt Act* and the *Oak Ridges Moraine Act*.

This park is designated as a Provincial and Regional Area of Natural and Scientific Interest (ANSI) for both earth science and life science features. The property to the north of the park has been identified as a candidate ANSI by the Aurora MNR District due to the presence of tallgrass prairie communities.

Private lands surround Holland Landing Prairie, with residential properties abutting the entire western boundary, private, undeveloped lands to the north and east, and a residential subdivision to the south of Cedar Street. A hydro right of way intersects the north-west corner of the site. There are no private lands within the park, nor are there any land use permits or leases. The park is located in close proximity to a number of local and regional parks and conservation lands.

8 PARK POLICIES

The following policies apply to the whole park.

8.1 Industrial Uses

Industrial activities are prohibited in Holland Landing Prairie Provincial Nature Reserve.

8.2 Commercial Uses

The PPCRA allows for the Ministry to enter into commercial agreements with respect to the use and occupation of land in Ontario Parks. However there are a number of provincial policies governing what type of commercial activities may occur in certain classes of parks and zones within a park.

Commercial harvesting, including trapping, fishing, and bait harvesting are not permitted in the park. There are no existing licences, and new operations will not be considered.

8.2.1 Other Commercial Operations

An easement exists for a hydro line right of way through the north-west quadrant of Holland Landing Prairie. A management agreement, describing appropriate

vegetation management prescriptions and opportunities for partnership, may be developed between the property manager and Ontario Parks.

8.3 Resource Management Policies

Holland Landing Prairie Provincial Nature Reserve will be managed in accordance with the policies set out in Ontario Provincial Parks: Planning and Management Policies (1992 update) for nature reserve class parks. All resource management projects will be undertaken consistent with the Class Environmental Assessment for Provincial Parks and Conservation Reserves. MNR will consider adaptive management approaches when managing park resources.

Resource management initiatives may be accomplished through partnerships.

Pesticides and herbicides may be used to protect or enhance park values.

This plan recognizes the inherent rights of the Aboriginal communities and acknowledges that their traditional activities in Holland Landing Prairie Provincial Nature Reserve will not be affected by the following park policies, provided that safety and conservation concerns are not compromised.

8.3.1 Land Management

The plant communities at Holland Landing Prairie are being increasingly impacted by a number of factors including encroachment by woody vegetation, invasive species, established conifer plantations, unauthorized mechanized travel and unauthorized trails. Suppression of natural fire regimes has also been a key stressor on the prairie values which the park was created to protect. Restoration of tallgrass prairie communities is central to the park's management priorities.

The proximity of Holland Landing Prairie to residential development makes it a desirable destination for passive recreational activities such as walking and nature enjoyment. The formalization of a walking trail system through the park could help to control access and encourage responsible use. Partnership with the Town of East Gwillimbury and/or the Regional Municipality of York would allow careful integration with their developing trail strategies.

Many of the park's neighbours are good stewards; however significant encroachment is occurring from some abutting properties. Back yard extensions, unauthorized fencing and outbuildings, yard waste disposal and removal of vegetation have had a detrimental effect on the tallgrass prairie communities at the edge of the park. Improved enforcement, fencing and signage, along with consistent communication with adjacent property owners, are required to ensure this impact is minimized.

The hydro right of way contains the best examples of tallgrass prairie in the park, in part due to regular maintenance activities which remove woody vegetation and

favour grasses and forbs. As described in section 8.2.1, a management agreement may be developed for these lands.

8.3.2 Water Management

There are no water bodies and no water management issues in the park.

8.3.3 Alien and Invasive Species

Alien species are plants, animals, and micro-organisms that have been unintentionally or deliberately introduced by human activity into areas beyond their normal range. Invasive species are those species whose introduction or spread threatens the environment, the economy and/or society, including human health. Alien species will not be deliberately introduced into the park. Where invasive species threaten natural or cultural values, a control program may be undertaken if feasible and practical.

Without active management, highly invasive species such as garlic mustard (*Alliaria petiolata*), spotted knapweed (*Centaurea maculosa*), common buckthorn (*Rhamnus cathartica*), European swallow-wort (*Cynanchum rossicum*) and Morrow honeysuckle (*Lonicera morrowi*), which currently exist in small areas of the park, may potentially significantly increase their current distribution and abundance (Korol, 2006).

8.3.4 Extirpated Native Species

Extirpated native species may be reintroduced, and existing populations replenished, if biologically feasible and acceptable, and desirable for perpetuating park values.

8.3.5 Insects and Diseases

Insect and disease control measures may be considered if the features and/or values of the park are threatened. Infestations by insects and diseases may be monitored and assessed.

Emergency measures may be considered to protect the park's features and values and would be subject to the appropriate MNR approval.

8.3.6 Forest Fire Management

Within Holland Landing Prairie Provincial Nature Reserve, fire is important for the formation and maintenance of tallgrass prairie communities. In these communities, fire acts as a main disturbance and favours the growth of forbs and grasses while consuming the woody plant material.

The Forest Fire Management Strategy for Ontario (OMNR, 2004) provides strategic direction for the management of wildfire across Ontario. Holland Landing Prairie Provincial Nature Reserve is in the Southern Ontario Fire Management Zone according to this provincial strategy. In this fire management zone

municipalities have a mandate to provide forest fire protection. The Town of East Gwillimbury is responsible for fire protection and response in Holland Landing Prairie Provincial Nature Reserve.

Fire management within Holland Landing Prairie Provincial Nature Reserve will help to restore and maintain ecological integrity while preventing personal injury, loss of values and social disruption. As resources allow, prescribed burning will be used in Holland Landing Prairie to restore and maintain tallgrass plant communities. Plans for any prescribed burning will be developed in accordance with MNR policy in cooperation with MNR fire management staff and/or the municipal fire department.

Fuel caches are not permitted in the park.

8.3.7 *Species at Risk*

Species at risk and their habitats will be protected in a manner consistent with the ESA 2007 and associated regulations.

8.3.8 *Vegetation Management*

Active vegetation management will be an integral component of park management activities. Over time, the remnant prairie plant communities have become severely degraded due to the establishment of coniferous plantations, fire suppression, incompatible recreation activities and encroachment from adjacent properties. These issues, along with the need to re-introduce regular disturbance regimes, which are critical to the maintenance of prairie ecosystems, must be addressed if the natural heritage values for which the park was established are to be protected.

There is indication that the existing seed bank and plant communities are in sufficiently good condition to support the re-establishment of tallgrass prairie in the park. Gartner Lee Associates Ltd. (1986) examined the effects of an accidental fire, which occurred near the Maple Street entrance to the park. The fire resulted in an increase in prairie plant species when compared with areas that had not been burned. In 1994 a small area of the plantation was cleared to allow for regeneration of the prairie vegetation, also resulting in an increase in prairie species. The results of these two studies suggest that the mimicking of natural disturbance regimes by conifer removal and prescribed burning will have a positive impact on the tallgrass communities.

The following guiding principles will apply to the management of vegetation communities in Holland Landing Prairie:

8.3.8.1 Management Techniques

Effective management and restoration techniques for tallgrass prairie habitats include: prescribed burning, mowing and cutting of woody vegetation,

applying herbicide, seeding and planting. These may be used alone or in combination.

8.3.8.2 Prescribed Burning

Fire is the most effective form of natural disturbance in tallgrass communities and should be introduced through a carefully implemented program of prescribed burning. This will restore and maintain tallgrass prairie species and communities by releasing dormant seed banks and re-establishing natural nutrient cycles. Other benefits of a prescribed burning program may include the control of alien, invasive and perennial woody species that are colonizing former prairie sites.

8.3.8.3 Sand Barrens

Unauthorized recreational activities and other human disturbances in the open sand barrens will be managed to allow for the re-establishment of native vegetation. Removal of adjacent conifers and other undesirable vegetation should be delayed until the sand barrens have been stabilized, as these can provide shelter from wind erosion and excessive evaporation. Once the barrens have been stabilized and adequately vegetated, management techniques used in adjacent tallgrass prairie remnants may be applied.

8.3.8.4 Conifer Plantations

MNR will manage the conifer plantations on the property, planted in 1946, 1949, and 1975. They have created dense shade and a layer of needles on the soil surface which inhibit the establishment and survival of tallgrass vegetation. A tree removal program for these plantations will be phased in. Priorities will include expansion of existing areas of tallgrass habitat, and removal of alien, invasive European alder (*Alnus glutinosa*) and Scots pine (*Pinus sylvestris*).

Some plantation areas may be restored to native forest. Conifers may be thinned to create gaps in the overstorey, which may allow for natural regeneration, or areas may be planted with native tolerant hardwood species.

8.3.8.5 Native Forest

Existing native forest, primarily located in the north-east quadrant of the site, will be allowed to develop naturally, and should require little active management. Periodic monitoring will ensure problems are identified and addressed appropriately. Invasive species should be removed wherever possible to prevent their establishment.

8.3.8.6 Removal of Vegetation and Woody Debris

Where complete removal for resource management purposes is not required, standing dead trees along trails or roads will be removed if they pose a risk, but otherwise left in place to provide wildlife habitat. Broken or rotted limbs or

crowns may be removed, leaving the trunk for wildlife habitat wherever possible.

Windthrown trees and live branches may be removed where they impede passage along trails. Wherever possible, only the portion of the tree across the trail will be removed and all remaining wood will be left in place. In natural areas, fallen trees and limbs will be left in place as long as they do not pose a risk to public safety or interfere with prairie restoration efforts.

Standing or fallen trees which are removed for resource management or public safety purposes may be marketed if economical. Removals should occur in winter wherever possible to minimize damage to sandy soils.

The cutting of live vegetation by park users or adjacent property owners is prohibited. Dumping of yard waste and garbage is prohibited.

8.3.8.7 Herbicide use

Herbicides may be used to control invasive species, protect or restore the habitat of native species, or to protect or restore rare ecosystems, in accordance with MNR policy and MOE regulations.

8.3.8.8 Planting and Seeding

Where planting or seeding is necessary, species native to the park will be used, and sources of these species will originate in or near the park wherever possible. Holland Landing Prairie will be maintained in as natural a state as possible.

8.3.9 Wildlife Management

Animal populations or individual nuisance animals may be controlled when essential to human health and safety, the health of the species, or the values for which the park has been established.

Where control is necessary, techniques which have minimal effects on other components of the park's environment will be used. Appropriate methods of population control may be undertaken directly by Ontario Parks or through partnerships under the strict supervision of Ontario Parks.

8.3.10 Cultural Resources Management

The management of cultural heritage resources within Holland Landing Prairie will be directed towards protection, as well as provision of heritage appreciation and research opportunities.

Controls to protect sites will be established where required.

The removal of artefacts, or the disturbance or destruction of historical features, is illegal and prohibited.

Where a project involves ground disturbance in an area with archaeological potential, the project will be considered for impacts to archaeological resources. Where a project may impact structures or cultural heritage landscapes, the project will be considered for potential effects to cultural heritage resources and appropriate mitigation measures will be applied. Staff will consult MNR's Technical Guideline for Cultural Heritage Resources.

8.3.11 Research

MNR encourages scientific research by qualified individuals contributing to the knowledge of natural and cultural history and to environmental management. Ontario Parks will review proposed research to ensure adequate consideration of potential impacts on protected area resources, features, staff and visitors.

Research and monitoring activities require a research authorization letter issued under the Research Authorization for Provincial Parks and Conservation Reserves Policy and must be consistent with Ontario Parks research and information strategies. Research will be subject to development and management policies associated with the park's classification, unless special permission is given. Research must meet all requirements under applicable provincial and federal legislation, and may require additional permits or approval (e.g. MNR Wildlife Scientific Collector authorization or *Endangered Species Act, 2007* permits).

Ontario Parks may consider allowing temporary facilities in support of approved research and monitoring activities. Sites altered by research activities must be rehabilitated as closely to their previous condition as possible, except where the specific intent of the research activities is disturbance for the purpose of ecological enhancement or restoration.

Specific research initiatives may include:

- The role of fire in restoring central Ontario prairie
- Long term seed bank retention within plantations
- Rate of spread of prairie vegetation into newly opened sites

Other priority research projects include:

- Tallgrass prairie ecology, restoration and management
- Managing the nature reserve to maintain or restore ecological integrity in the context of increasing urbanization and resulting pressures
- Archaeology and cultural heritage

8.3.12 Inventory and Monitoring

Planning and management decisions are intended to ensure the ecological integrity of protected areas. Consideration will be given to social and economic components.

Ontario Parks will ensure that these decisions are made with the best available information. Where this information is lacking, Ontario Parks may conduct inventories and monitoring, as necessary, to provide this information. Such efforts will be undertaken based on established methodologies and best practices. Inventory and monitoring will foster an adaptive management approach to protected areas management.

Priority monitoring projects include:

- Rates of change in composition of vegetation communities with management towards the goal of prairie restoration
- Change in quantity, diversity, and distribution of significant prairie species
- Butternut health, regeneration and occurrence

8.4 Recreation Management Policies

Where compatible with park values and the maintenance of ecological integrity, low-intensity day-use activities that promote public awareness and enhance appreciation of the park's natural and cultural heritage will be permitted. Recreation will be limited to designated walking trails and the existing snowmobile trail which runs along the east side of the park. Park facilities will be designed with protection and restoration of ecological integrity as the first priority.

8.4.1 Services for Visitors

There are currently no facilities for visitors in the park. Services may eventually include formalized walking trails and a self-guiding interpretive program. Washrooms and parking facilities will not be provided.

8.4.2 Fees

No fees are collected at this non-operating park.

8.4.3 Hunting

Hunting is not permitted.

8.4.4 Mechanized Travel

An agreement with the Holland Landing Snowmobile club allows for access and maintenance of the snowmobile trail on the east boundary of the park. (Fig. 3) Snowmobiles are permitted only on the designated trail. Expansion of the snowmobile trail or any new mechanized trails inside the park will not be

FIGURE 3

ZONING



Holland
Landing
Prairie

Legend

Zoning

Access

Nature Reserve

Other Features

Trail

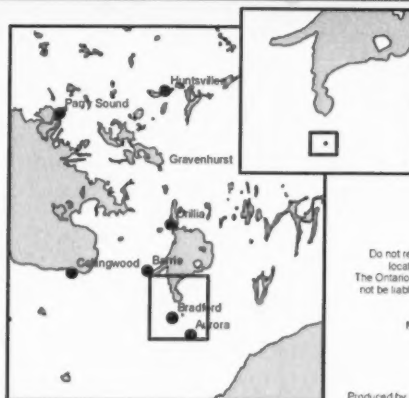
Hydro Line

Minor Roads

Major Roads

Local Park

0 100 200
Metres

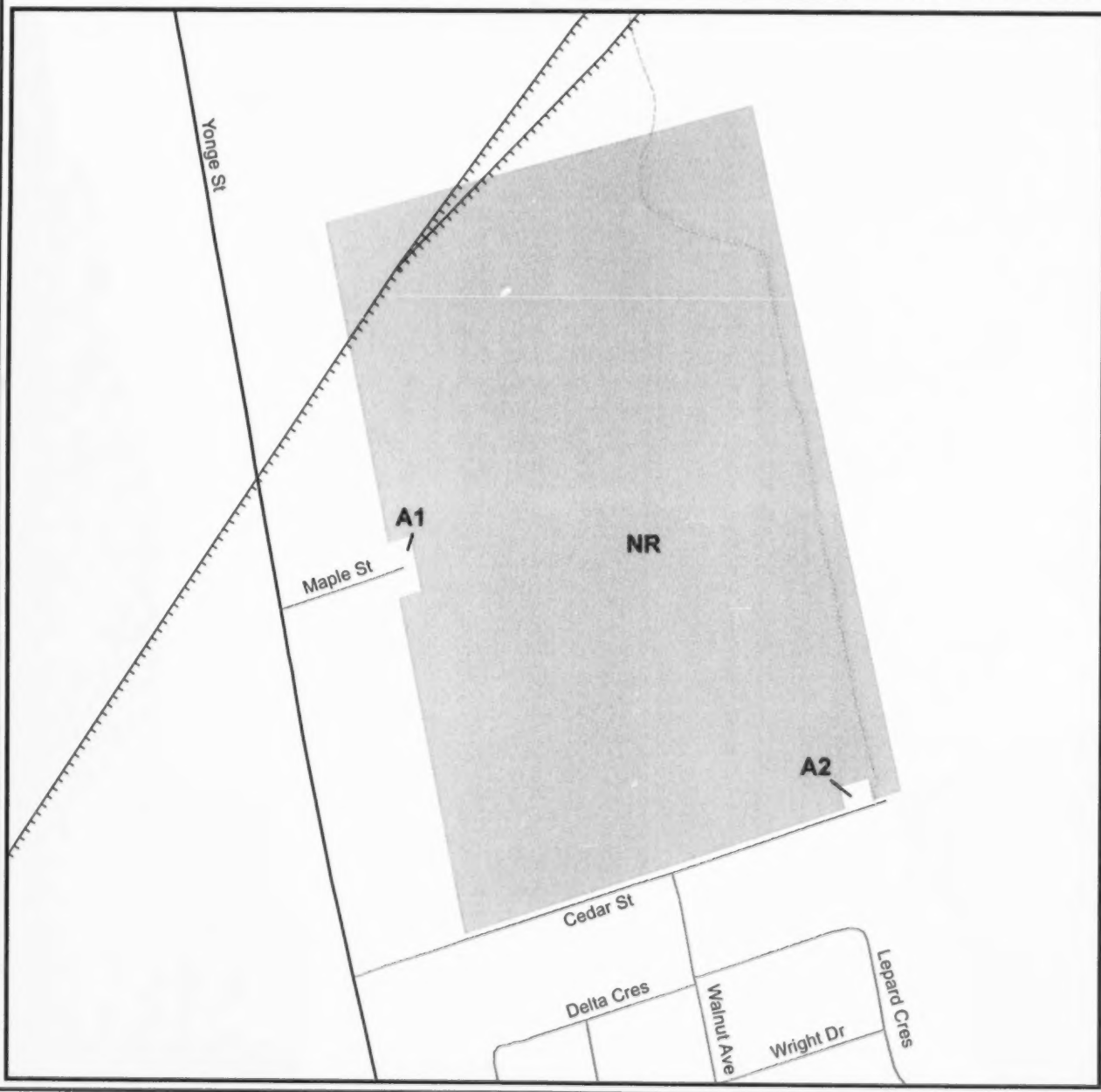


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Datum: North American Datum 1983
Base Derived From: MRVRS
Produced by: Jocelyn Moffett, Ontario Parks, Central Zone



permitted. Motorized vehicles, including ATVs and trail bikes, are prohibited. Bicycles are not permitted.

Unauthorized use of ATVs and motorbikes is an on-going management concern, and has resulted in significant soil erosion and damage to vegetation. Fencing and signage installed by Ontario Parks and the local snowmobile club have to date been unsuccessful in excluding these activities. Enforcement will focus on controlling access and eliminating unauthorized mechanized use.

Ontario Parks staff may use ATVs or other vehicles for park maintenance purposes as directed by the park superintendent. Hydro One may use mechanized travel along the existing right of way only, to access their facilities within the hydro corridor. Details regarding permitted uses may be formalized in an agreement with Hydro One.

Should the snowmobile club no longer require access to the portion of the trail which runs through the nature reserve, this use of the trail will be permanently discontinued. The trail will continue to be maintained as a walking trail unless park values are compromised. Opportunities to move the trail outside the park boundary will be considered.

8.4.5 Other Recreational Uses

A walking trail follows the authorized snowmobile trail along the east boundary of the park. Additional informal walking trails run through the centre of the site. Several trails have been created by unauthorized ATVs and other off-road vehicle use.

A formalized trail network may be developed to provide reasonable non-motorized recreational access through the site while protecting the values of the nature reserve. Authorized trails may be re-routed or improved to protect park values and enhance natural heritage education opportunities; all others will be closed. Trail conditions will be monitored and sections may be temporarily or permanently closed to prevent erosion, trampling, rutting and widening. All trails will be designed and managed with ecological integrity as the first priority.

Recreational use will be geared toward passive activities such as walking, nature appreciation, and self-guided interpretive learning for visitors. An interpretive plan may be developed. This plan will focus on the significant plant species and vegetation communities of Holland Landing Prairie, and the park's management and restoration goals.

Camping is not permitted in the park.

8.4.6 Emerging Recreation Uses

Adventure racing is not permitted.

Virtual geocaching may be considered as a recreation use subject to approval by the park superintendent. Physical geocaching will not be permitted.

There are emerging recreational uses for which no current or limited management policy exists. The park superintendent will use legislation, park policy and guidelines that are in place to manage emerging uses.

8.5 Operations Policies

Holland Landing Prairie is a non-operating park. As such, operations will be limited to management and enforcement activities which protect or restore the natural heritage values of the park. The park superintendent is responsible for the management of the park.

8.5.1 Natural Heritage Education

The goal of a Natural Heritage Education (NHE) program is to develop visitor awareness and appreciation of Ontario Parks' natural and cultural heritage, and foster a commitment to its protection for future generations. Programming includes three components of NHE: information, interpretation and outdoor recreation.

Interpretive activities will educate and inform visitors of the significant plant communities which the park protects. Visitor education will be integral to the success of restoration and management activities and will be encouraged.

A NHE operating plan may be developed, with an emphasis on self-guided interpretive opportunities.

8.5.1.1 Information

Information about the park and the plant communities it protects will be available on the Ontario Parks website and at Sibbald Point Provincial Park. Other information, including interpretive signs and brochures, may be developed. Where feasible, information about the park may be available through municipal and regional information sources, including websites, trail guides, and visitor information centres.

8.5.1.2 Park Interpretation

Interpretive programs and facilities provide park visitors with a greater appreciation for, and understanding of, the natural features of Holland Landing Prairie.

Predominant interpretive themes for the park will include:

- The natural history of tallgrass prairies in Ontario
- The importance of biodiversity and the role of significant plant and wildlife communities in the province's protected areas system
- Fire ecology

- Ecological restoration
- Urbanization, disturbance and the protection of rare ecological features in the landscape

Messages developed around these themes may be conveyed to park visitors through publications, self-guided interpretive trails and, where feasible, guided tours led by park staff, local naturalist groups, and other interested parties.

8.5.2 Partnerships

In the implementation of the park management plan, Ontario Parks may pursue opportunities for partnerships involving other agencies and groups through formal partnership agreements. Partners may represent the local community, and local and provincial interests. Partners will work with Ontario Parks to assist in the implementation of the management plan and will follow provincial park policies and regulations.

The partnership with the local snowmobile club has been successful and will continue to be fostered, where it remains beneficial to the management goals of the park. Partnerships with the Town of East Gwillimbury, the Regional Municipality of York and the Lake Simcoe Region Conservation Authority may continue to be pursued and formalized. In particular, partnerships relating to the management of park trails may be formalized. Partnerships with local naturalist groups, cultural organizations, and other agencies with an interest in the special natural and cultural heritage features of the park may be pursued. An agreement with regard to vegetation management and access may be pursued with Hydro One.

8.6 Marketing and Communications Policies

8.6.1 Marketing

A marketing plan will not be developed for this nature reserve, unless a significant need or opportunity arises.

8.6.2 Communications

Information regarding the park will be made available through the Ontario Parks website, at Holland Landing Prairie Provincial Nature Reserve and at Sibbald Point Provincial Park.

8.7 Development Policies

All development undertaken by Ontario Parks or by partners on its behalf will comply with *A Class EA-PPCR*, and will be carried out in accordance with approved site and development plans that meet standards for provincial parks.

Areas proposed for development will require prior assessment for significant cultural heritage features and natural values, such as species at risk, to ensure these values are identified and protected at the site.

Any development within the park boundary will require approval from the park superintendent, and may require applicable work permits. All developments will be located and designed to avoid or minimize negative impacts to the prairie communities and other natural and cultural values.

8.7.1 Internal Roads

There are no roads in the nature reserve. New roads are prohibited.

8.7.2 Access and Parking

The nature reserve can be accessed at the east end of Maple Street and from the north side of Cedar Street (Fig. 3).

Informal parking is available on Maple Street and Cedar Street. Formal parking areas will not be developed.

8.7.3 Campgrounds, Day Use Areas, Roofed Accommodations, Maintenance and Administrative Areas

The development of campgrounds, day-use facilities, roofed accommodations, and maintenance and administrative areas is not permitted in the nature reserve.

9 ZONING AND ZONE MANAGEMENT POLICIES

Lands within Holland Landing Prairie Provincial Nature Reserve are zoned in accordance with their environmental and cultural values, and their need for protection. Zones differentiate the sensitivity of the natural and cultural values, and the permissible degree of development, recreational uses and management practices.

The majority of the land base within Holland Landing Prairie will be zoned as nature reserve. Two small access zones at the Maple and Cedar Street entrances facilitate park operations and resource management activities (Fig. 3).

9.1 Nature Reserve Zone

Nature reserve zones protect the provincially significant earth and/or life science features within a park, and may include a protective area in which a minimum of development is permitted. Development is generally restricted to trails, necessary signs, interpretive facilities (where warranted) and temporary facilities for research and management.

9.1.1 NR -1 Holland Landing (34 ha)

Zone NR-1 encompasses nearly the entire land base of the park. This zone protects the unique natural heritage values associated with the provincially rare tallgrass prairie plant communities. Management activities will focus on the protection and restoration of tallgrass prairie and other native plant communities such as native hardwood forest. As part of the restoration efforts, emphasis will be put on the protection and restoration of species at risk and addressing issues of invasive species.

9.2 Access Zones

Access zones serve as staging areas, a means of both providing and regulating use in areas of a park geared towards recreation. Provisions may be made for limited orientation, interpretive or educational facilities, though generally more for self-use rather than through structured personal service. Limited facilities for research and park management may also be present.

9.2.1 A-1 Maple Street Access (<1ha)

A small access zone immediately inside the west boundary of the nature reserve at Maple Street provides a staging area for resource management, interpretive and enforcement activities.

9.2.2 A-2 Cedar Street Access (<1ha)

A small access zone immediately inside the south boundary of the park at the eastern end of Cedar Street provides a staging area for resource management, interpretive, and enforcement activities. The snowmobile trail enters the park through this access point.

10 IMPLEMENTATION PRIORITIES

Park management, development and operations proposals will be phased in, to the extent possible, as follows:

- Develop a management agreement between Hydro One and Ontario Parks, describing appropriate vegetation management prescriptions and opportunities for partnership within the hydro corridor right of way
- Implement vegetation management activities in the following order of priority:
 1. Maintenance and enhancement of tallgrass prairie remnants in the hydro corridor and other non-forested sites
 2. Stabilization of active sand blow-out areas
 3. Phased in removal of conifer plantations and restoration to prairie habitat.
 4. Connect and enlarge existing areas of tallgrass habitat
- Identify, map and formalize an approved trail system
- Repair and/or install fencing around the perimeter of the park

- Clearly identify park boundary and access points, and install or replace signs as required
- Design and install a self guided interpretive sign program

11 PLAN AMENDMENT and REVIEW

The park management plan can be reviewed or amended to address changing issues or conditions. At ten year intervals, this plan will be examined for the need of a re-write, amendment, or administrative update.

A examination may involve a reassessment of all or part of the plan, including classification, zoning, goal, objectives and all resource management, operations and development policies. An amendment can be considered to address specific issues or needs.

12 CONSULTATION

Aboriginal and public consultations have played a very important part in the Holland Landing Prairie management planning process. The following is a summary of consultation undertaken for this planning process:

12.1 Summary and Results of Aboriginal Consultation

- Phase 1 - Invitation to Participate; Holland Landing Prairie Provincial Nature Reserve Terms of Reference and Background Information

During the consultation period to review the terms of reference and comment on the background information (April 9 – May 26, 2009), an invitation to participate was sent to the Union of Ontario Indians, Chiefs of Ontario, Ogemawahj Tribal Council and the Chippewas of Georgina Island. No formal response has been received to date from these groups.

- Phase 2 – Preliminary Management Plan (current phase)

An invitation to participate and a copy of the preliminary management plan were sent to the above noted communities and Provincial Treaty Organizations as part of this planning stage. Comments received regarding the preliminary management plan will be considered in the development of the final management plan.

Participation is encouraged at any time during the management planning process.

12.2 Summary and Results of Public Consultation

- Phase 1 - Invitation to Participate; Holland Landing Prairie Provincial Nature Reserve Terms of Reference and Background Information

The Holland Landing Prairie Provincial Nature Reserve Terms of Reference was approved in February 2008. The Invitation to Participate and Inspect the Approved Terms of Reference and Background Information was released for public review on April 9, 2009. Letters were mailed to persons and organizations on the park planning mandatory contact list, stakeholders and interested persons, and an announcement was made through a newspaper notice in the Era Banner. Bulletins were posted in Sibbald Point Provincial Park and a notice was posted on the EBR Environmental Registry. A 45-day period was provided to allow interested individuals and parties to submit comments.

Nine written comments were received from the public. Comments related primarily to support for protection and restoration of ecological values, concerns over damage by unauthorized vehicles such as all terrain vehicles (ATVs) and trail bikes, and requests to be added to the mailing list for future management planning communications.

- Phase 2 – Preliminary Park Management Plan (current phase)

During this phase of consultation, the public is offered an opportunity to review and comment on management policies and activities which are being put forward for Holland Landing Prairie Provincial Nature Reserve. Invitations to participate were mailed to persons and organizations on the park planning mandatory contact list, local landowners, stakeholders and interested individuals. The 45-day review and comment period, April 4 to May 19, 2011, was announced through a newspaper notice in the Aurora Era Banner and a posting on the EBR Environmental Registry. Notices were also posted at the Cedar and Maple Street entrances to the nature reserve. A public information session will be held:

April 19, 2011, 5:30pm to 8:30pm
River Drive Park Community Centre,
20 Oak Ave, East Gwillimbury, Ontario

The public and Aboriginal communities will have an opportunity to inspect the Preliminary Management Plan for a minimum period of 45 days after its formal release. This will allow interested participants to comment on proposals in the plan.

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